Synthesis of Some Substituted Azoles Derived from 2-Aryl Cinchoninic Acid

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In this paper the synthesis of some substituted 1,3,4-oxadiazoles, thiadiazole and 1,2,4-triazole were synthesised from 4-chlorophenyl- cinchoninic acid (1) by its reaction with thionyl chloride then with amino acid esters (2-5) to give the esters (6-9). The reaction of the later esters with hydrazine hydrate in ethanol gave the corresponding acid hydrazides (10-13). The acid hydrazide (7) was converted to substituted thiosemicarbazide (14) by its reaction with phenyl isothiocyanate which then treated with concentrated sulfuric acid, 1% NaOH and lead oxide in methanol to give substituted 1,3,4-thiadiazole, 1,2,4-triazole and 1,3,4-oxadiazoles (15-17) respectively. The structures of the synthesised compounds were confirmed by $^1$H NMR, IR, elemental microanalysis and physical means.